# 2005 Genomics:GTL Workshop
# February 6 – 9, 2005
# AGENDA

**Sunday February 6, 2005 (Maryland Suites)**

5:00 – 8:00 Registration and poster set up
6:00 – 8:00 No host mixer (TV available for Super Bowl "Eagles vs. Patriots")

**Monday February 7, 2005 (Ballroom Salon 2)**

7:30 - 8:30 *Continental breakfast and registration*

*Chair:* **Thomassen (BER)**
8:25 - 8:30 Logistics - **Thomassen**
8:30 – 8:45 Welcome and state of the Genomics:GTL program - **Patrinos**
8:45 – 9:45 Microbial toxins promote biodiversity in a real-life game of Rock - Paper - Scissors – **Riley** (Keynote)
9:45 -10:15 Carbon sequestration in *Synechococcus*: A computational biology approach to relate the genome to ecosystem response - **Heffelfinger**

10:15 – 10:30 *Break*

10:30 – 10:50 Structural studies of the full length enhancer protein NtrC - **De Carlo**
10:50 – 11:10 Passive contributions to the radioresistance of *Deinococcus radiodurans* R1 - **Battista**
11:10 - 11:40 The *Shewanella Federation*: Functional genomic investigations of dissimilatory metal-reducing *Shewanella* - **Fredrickson**
11:40 – 12:00 Metabolomic functional analysis of bacterial genomes - **Unkefer**

12:00 – 1:30 *Lunch (Boxed)* **(Ballroom Salon 1)**

*Chair:* **Houghton (BER)**
1:30 – 2:30 Strategies for large scale protein complex characterization: application to the yeast RNA processing machinery - **Seraphin** (Keynote)
2:30 – 3:00 VIMSS Month 29: Using functional and comparative genomics to discover environmentally important pathways in *Desulfovibrio vulgaris* and other microbes - **Arkin**

3:00 - 3:20 *Break*

3:20 – 3:50 Physics-based and information-based insights into microbial ion transport mechanisms and functions- **Jakobsson**
3:50 – 4:10 Imaging microbial proteins and multi-protein complexes using quantum-dot probes - **Bao**
4:10 – 4:40 Analysis and synthesis of genomes, proteomes, and marine biomes – **G. Church**

4:40 - 5:00 *Break*

5:00 – 8:00 Poster session A **(Ballroom Salon 3)**

**Tuesday February 8, 2005 (Ballroom Salon 2)**

7:30 - 8:25 *Continental breakfast and registration*

*Chair:* **Hirsch (BER)**

8:25 – 8:30 Logistics - **Hirsch**

8:30 – 9:30 From perturbation analysis to the genomic regulatory code: The sea urchin *Endomesoderm* GRN - **Oliveri** (Keynote)

9:30 -10:00 Nanowires, capacitors, and other novel *Geobacter* electron transfer mechanisms: Their regulation and expression in subsurface environments and on electrodes - **Lovley**

10:00 – 10:20 A Bayesian view of the curse of dimensionally in network inference and what to do about it- **Lawrence**

10:20 – 10:40 *Break*

10:40 - 11:10 An Update on the Global Ocean Sequencing Project. **Venter**

11:10 – 11:30 Genetic tools for exploring stress responses in *Desulfovibrio vulgaris* Hildenborough - **Wall**

11:30 – 12:00 Comparative metagenomics of microbial communities - **E. Rubin**

12:00 – 1:30 *Lunch (Boxed)* **(Maryland Suites)**

*Chair:* **Katz**

1:30 – 1:50 Omics of environmental microbes - **Keasling**

1:50 – 2:20 Mining for microbes: acid mine drainage can reveal how microbial communities are structured and function- **Banfield**

2:20 – 2:50 Educating students for the new biology - **Colvin**

2:50 - 3:20 BER Facilities roadmap - **Houghton**

3:20 – 3:30 *Break*

3:30 - 5:00 **Breakout sessions (Virginia A,B, & C)**

I. What would you do with a protein production facility, if it existed? **Kaplan/ Drell**
II. The DOE GTL Computational Biology Centers - **Colvin**
III. Proteomics of natural assemblages - **Banfield**

5:00 – 8:00 Poster session B **(Ballroom Salon 3)**

**Wednesday February 9, 2005 (Ballroom Salon 2)**

7:30 - 8:25 *Continental breakfast and registration*

*Chair:* **Drell (BER)**

8:25 – 8:30 Logistics - **Drell**

8:30 - 9:00 Genomics:GTL Center for molecular and cellular systems: Progress in high throughput protein complex analysis - **Buchanan**

9:00 – 9:20 A tightly-regulated oscillatory circuit formed by conserved master regulator proteins controls the *Caulobacter* cell cycle - **McAdams**

9:20 - 9:40 Development of genome-scale expression methods - **Collart**

9:40 – 10:00 Automating the quest for novel prokaryotic diversity - **Garrity**

10:00 – 10:15 *Break*

10:15 – 11:15 Technologies for characterization of single prokaryote cells – **Dovichi** (Keynote)

11:15 – 11:35 The use of microarray technology as an integral component of the *Geobacter sulfurreducens* Genomics:GTL project - **Methe**

11:35 – 11:55 *Pelagibacter ubique*: A post-genomic investigation of carbon metabolism and photochemistry in an extraordinarily abundant oceanic bacterium -**Giovannoni**

11:55 – 12:30 Breakout group summary, meeting wrap-up, and goodbyes - **Thomassen**